

KEY TAKEAWAYS

The regional and local transportation agencies play an important role in development of strategic planning models for the region's transportation systems management and operations (TSMO). The Capability Maturity Model (CMM) is a new self-assessment paradigm that helps agencies assess their strength and weaknesses in various operational areas.

The National Operations Center of Excellence convened a virtual Peer Exchange to bring agencies together to exchange ideas, share best practices, and discuss how operations can be improved at each agency. This peer exchange discussed three overall topics:

1. Past and current experiences with the CMM framework and self-evaluation process
2. Current challenges facing local and regional agencies in TSMO, and how these will impact the future of CMM adoption
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These best practices are summarized below. All presentations from this peer exchange are available at <https://www.transportationops.org/ondemand-learning/itenocoe-virtual-peer-exchange-regional-and-local-tsmo-learning-capability>

CMM adoption

CMM evaluation frequency: The frequency of conducting CMM evaluations depends on the agency's level of activity in the region. The CMM re-evaluation is an opportunity for the agency to assess if their past action plan has been effective and if they need to modify their focus areas based on the evaluation of the results of previous activities. Additionally, as part of the re-evaluation process the CMM assessment scores can also be developed for each of the local agencies within the region. This helps the agency identify the level of maturity of different capability elements for a region as a whole and for each of the region's local agencies.

CMM assessment workshops: The CMM evaluation workshops result in an implementation plan where a detailed action plan is developed that specifies desired outcome of each action. In practice, the CMM workshops have helped many agencies to re-examine their high level objectives, prioritize their focus areas, and emphasize interagency collaborations. Federal Highway Administration fact sheet describes the three steps of capability maturity framework as follows:

- 1- Self-assessment: work with your stakeholders to assess where you are in terms of the capabilities in each of the six areas (Business and process, systems and technology, performance measurement, workforce, culture, and collaboration)
- 2- Identify areas of improvement and the desired levels of capability to improve program effectiveness
- 3- Identify actions you need to take to move to the desired levels of capability

Lessons learned from CMM evaluations

Some of the lessons learned that was passed on as part of the peer exchange (Source: NITTEC):

- Need to increase understanding of TSMO at state level using the region as a platform to increase awareness at state level
- Need to have an effective collaboration between the state DOT and regional/local agencies
- Need to engage higher up management

Future steps for improving the current CMM Conditions

Some of the action plans/future steps that were discussed for improving the maturity of capability elements (Source: NITTEC):

- Development of a strategic plan specifying goals, objectives, and priorities
- Active participation in State deliberations to increase awareness about TSMO and CMM
- Prioritizing the operational optimization of regional/local arterials
- Raising awareness within the agency about the value of the TSMO program
- Sustaining active participation of staff and enhancing sharing of resources
- Dissemination of TSMO best practices to local jurisdictions

Institutionalizing TSMO

In the CMM self-assessment process, agencies evaluate their maturity on different capability elements using an approach that best fit their needs. With the nature of the self-assessment process being subjective, the self-assessment scores may overestimate or underestimate agency's current level of maturity. One of the topics that was emerged in the peer exchange discussion was the viability of making comparison between different agencies using the CMM scores. It is important to keep in mind that the main goal in the CMM process is not making such comparisons but to help agencies find their current levels of capability and identify future focus areas. As agencies start to evaluate their CMM conditions, constructive conversations are taken place about potential areas of improvement such as improving resource allocation, having more effective collaboration, and measuring and monitoring performance.

Cultural shift around TSMO

Capability maturity models may not be as well-established and widely known as other asset management programs. While some agencies have a TSMO division, others may not have an official position that has been assigned only to TSMO-related work. Even within organizations with a TSMO division, it has been proven that it is essential for the agency's other working divisions and the collaborating agencies to work closely with the TSMO division.

Integrated Corridor Management

The integrated corridor management (ICM) framework utilizes an integrated approach toward management of existing infrastructure along major corridors for better efficiency in the movement of people and goods. ICM considers the corridor a multimodal system where the operational decisions are

made for the benefit of the corridor as a whole. AZTech has initiated a pilot effort for implementing ICM strategies through facilitating the coordinated freeway-arterial operations and a multi-agency incident management at Loop 101 within the Phoenix metropolitan area. Some of the key elements that played an important part in the pilot implementation of ICM at loop 101 were:

- Having a sustainable multi-agency partnership
- Having a detailed plan of operations
- Having a formal agreement between collaborating agencies
- Utilizing state-of-the-art and robust technology and other agency resources
- Training staff and raising awareness in the agency for better culture acceptance

See the following paper as a reference to learn more about integrated corridor management:

[Thompson, Dale, and Christopher Hill. "Understanding Integrated Corridor Management \(ICM\)." ITE 2008 Annual Meeting and Exhibit. 2008.](#)